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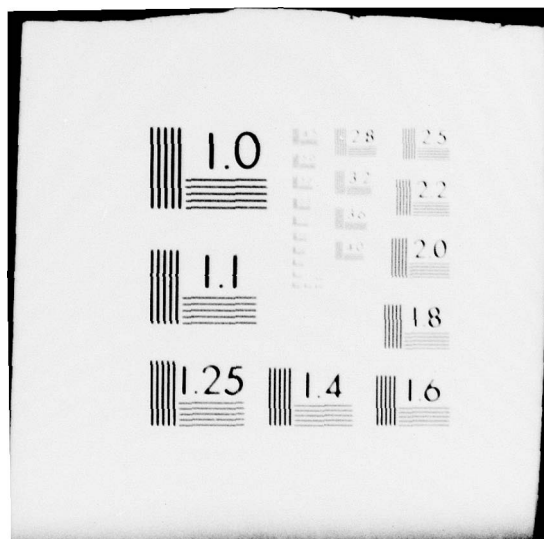
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Report 1070-04-79-CR

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# **Analysis to Determine Functional and Systems Requirements for an On-Line Structure and Composition System (SACS)**

## **Report of Task E**

**Analysis of Current and Developing Systems Which Interface with LOGSACS and PERSACS to Determine to What Extent They Do or Do Not Support the Data Requirements of an On-Line SACS**

By:

Francis O. Deppner  
John J. Anderson  
Whitney C. Scully

June 1979

OPERATIONS ANALYSIS GROUP

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Submitted To:

Mr. Gene P. Hill  
Force Accounting and Systems Division  
Office of the Deputy Chief of Staff for Operations and Plans  
Washington, D.C. 20310

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) There are current and developing systems which either provide, or will be required to provide, data to SACS. These systems were analyzed to determine if they do/do not support an improved/on-line SACS. The support provided is very limited; therefore, the shortcomings of each of the systems were identified and recommendations for their improve- ment were provided. Recommendations were also provided for a new system to support phasing plus some new managerial procedures.		

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# ABBREVIATIONS AND ACRONYMS

AAO	Army Acquisition Objective
ACC	US Army Communications Command
ADCON	Army Deployment Control Code
AESRS	Army Equipment Status Reporting System
AFP	Army Force Program
AMSCO	Army Management Structure Code
AOC	Army Operations Center
ARLOC	Army Location Code
ARSTAF	Army Staff
AS	Authorization Subsystem
ASI	Additional Skill Indicator
AUDB	Authorizations Data Base
AURS	Automated Unit Reference Sheet
AUTS	Automated Update Transaction System
BOIMARS	Basis of Issue Monitoring and Recording Systems
BOIP	Basis of Issue Plan
Br	Branch
BRNCH	Branch
BY	Budget Year
CBS	Civilian Budgeting System
CCNUM	Command Control Number
CCT	Consolidated Change Table
COMPO	Component Code
CONUS	Continental United States
CPU	Central Processing Unit
CSR	Chief of Staff Regulations
CY	Calendar Year
DA	Department of Army
DAMO-FDA	DCSOPS, Force Management, Force Accounting and Systems Division
DAMO-RQR	DCSOPS, Requirements, Requirement Programs and Priorities Division
DAMPL	Department of the Army Master Priority List



DAPE-MBA	DCSPER, Manpower, Plans and Budget, Allocation and Documentation Division
DAPPL	Department of the Army Planning Priority List
DARCOM	US Army Materiel Development and Readiness Command
DBMS	Data Base Management System
DCSLOG	Deputy Chief of Staff for Logistics
DCSOPS	Deputy Chief of Staff for Operations and Plans
DCSPER	Deputy Chief of Staff for Personnel
DCSRDA	Deputy Chief of Staff for Research, Development, and Acquisition
DEPLO	Deployment Location Code
DESCOM	US Army Depot System Command
DOCNO	Document Number
DPMNT	Deployment
DPI	Data Processing Installation
DPS	Decision Package Set
EARA	US Army Equipment Authorization Review Activity
EDATE	Effective Date
EQPF	Equipment Phasing File
ERC	Equipment Requirement Code
FAS	Force Accounting System
FDMIS	Force Development Management Information System
FICOD	Force Identification Code
FORDIMS	Force Development Integrated Management System
FSS	Force Structure Subsystem
FYDP	Five Year Defense Plan
Gd	Grade
GOCOM	General Officer Command
HQDA	Headquarters Department of Army
H-530	Equipment Validation Report (prepared at DESCOM from LOGSACS data)
IIQ	Initial Issue Quantity
ITAADS	Installation TAADS
JCS	Joint Chiefs of Staff
LEA	US Army Logistics Evaluation Agency
LIC	Language Indicator Code

LIN/LINUM	Line Item Number
LOGSACS	Equipment (Logistics) Structure and Composition System
MACOM	Major Command
MARCM	Major US Army Reserve Command
MILID	Military Identity Aggregate
MILPERCEN	US Army Military Personnel Center
MIS	Management Information System
MOC	Management of Change
MOS/MOSCO	Military Occupational Specialty
MRC	US Army Materiel Readiness Command
MTOE	Modified Table(s) of Organization and Equipment
NATO	North Atlantic Treaty Organization
ODCSLOG	Office, Deputy Chief of Staff for Logistics
ODCSOPS	Office, Deputy Chief of Staff for Operations and Plans
ODCSPER	Office, Deputy Chief of Staff for Personnel
ODCSRDA	Office, Deputy Chief of Staff for Research, Development, and Acquisition
OPAGY	Operating Agency
OSD	Office of the Secretary of Defense
PAAS	Personnel Authorizations Analysis System
PBG	Program and Budget Guidance
P/BS	Program/Budget Subsystem
PDM	Program Decision Memorandum
PEM	Phased Equipment Modernization
PERDIMS	Personnel Deployment and Distribution Management System
PERSACS	Personnel Structure and Composition System
POM	Program Objective Memorandum
POMCL	POMCUS ID for LIN
POMCUS	Prepositioning of Materiel Configured to Unit Sets
POMCU	POMCUS ID for Unit
PPBS	Planning, Programming, and Budgeting System
PROFA (FORFA)	Master Force
PY	Program Year
QQPRI	Qualitative and Quantitative Personnel Requirements Information



Qtr	Quarter
Qty	Quantity
RCOMD	Resource Command
RDAISA	US Army Research, Development, Acquisition Information Systems Agency
RDP	Required Deployment Data
REQVAL	Requisition Validation
ROBCO	Readiness Objective Code
ROMSR	Rounding by Most Significant Residuals
SACS	Structure and Composition System
SA	Semi-Annual
SAMPAM	System for Automation of Materiel Plans for Army Materiel
SB	Supply Bulletin (700-20)
SBCOM	Subcommand Code
SHN	Short Hand Note
SIGMA	SACS Information Gathering and Management Analysis System
SRC/SRCOD	Standard Requirements Code
SSN	Standard Study Number
STATS	Unit Status Code
SYCMACG	System Configuration Management and Control Group
TAA	Total Army Analysis
TAADS	The Army Authorization Documents System
TAEDP	Total Army Equipment Distribution Program
TC	Type Classification
TDA	Tables of Distribution and Allowances
TDATE	Termination Date
TL	Troop List
TLR/S	Total Logistic Readiness/Sustainability
TOE	Tables of Organization and Equipment
TRADOC	US Army Training and Doctrine Command
UIC/UICOD	Unit Identification Code

## SECTION 1

### INTRODUCTION

#### 1.1 BACKGROUND

This report covers Task E, "Analyze the Current and Developing Systems Which Interface with LOGSACS and PERSACS to Determine to What Extent They Do or Do Not Support the Data Requirements of an On-Line SACS," of an ODCSOPS project entitled "Analysis to Determine Functional and Systems Requirements for an On-Line Structure and Composition System (SACS)," Contract Number MDA903-78-C-0445, 26 September 1978. Task E required that current and developing systems which provide data to SACS be analyzed to determine the degree to which they do or do not support the improved/on-line SACS concept. The task objectives were to:

- Identify to what extent current and developing systems support the improved/on-line SACS concept.
- Identify to what extent current and developing systems do not support the improved/on-line SACS concept.
- Identify data fixes that will be implemented or are practical for implementation by developing systems.
- Identify data voids that will continue to exist after implementing the developing systems.

#### 1.2 RESEARCH METHODOLOGY

The methodology employed was to analyze current and developing systems and develop information concerning the extent of support they will or will not provide the improved/on-line SACS. The current and developing systems involved are only those which provide feeder data to the SACS processes.

#### 1.3 SCOPE

The scope of this task encompassed the functional concept and data requirements for the improved/on-line SACS as generally outlined in the Report of Task D, Data Requirements Document. The improved/on-line SACS

concept established specific timeliness and accuracy standards, along with a conceptual processing framework which includes improved Basis of Issue Plan (BOIP) and Short Hand Notes (SHN) processing, the implementation of equipment and personnel requirements and authorizations phasing, and the upgrade of all SACS software to accommodate on-line force selection, review, analysis, impact determination, and the production of both LOGSACS and PERSACS.

## SECTION 2

### ANALYSIS TO DETERMINE HOW CURRENT AND DEVELOPING SYSTEMS, PROCESSES, AND DATA SUPPORT AN IMPROVED/ON-LINE SACS

#### 2.1 GENERAL

The systems considered in this analysis are:

- The Force Structure Subsystem (FSS),<sup>1</sup> Force Development Integrated Management System (FORDIMS)
- The Authorizations Subsystem (AS),<sup>1</sup> FORDIMS
- The Table of Organization and Equipment (TOE) File
- The BOIP File
- The SHN File
- The Phased Equipment Modernization (PEM) processing module of the Total Army Equipment Distribution Program (TAEDP)

No attempt has been made to analyze the Vertical Force Development Management Information System (VFDMIS). The development of VFDMIS has not progressed to the point where its files (data) and processing are defined. Since VFDMIS is just being formulated, it should address the SACS data and processing requirements being identified in this project.

#### 2.2 CURRENT AND DEVELOPING SYSTEMS

##### 2.2.1 Current Systems

The current systems that provide feeder data to SACS are the Force Accounting System (FAS), HQDA TAADS, TOE, BOIP, and SHN. FAS will be replaced by FSS by the end of calendar year 1979. HQDA TAADS has already been replaced by AS. The current SACS software must use the data stored in these two subsystems; therefore, conversion software must convert FSS

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<sup>1</sup>When FORDIMS is completely implemented, FSS and AS will replace FAS and HQDA TAADS, respectively; therefore, FSS and AS were considered systems to be current for purposes of this analysis.

and AS formats to the respective FAS and HQDA TAADS formats for current SACS application.

The TOE and BOIP files are provided to HQDA by the US Army Training and Doctrine Command (TRADOC). These files are updated by the US Army Management Systems Support Agency (USAMSSA) to generate the TOE and BOIP files that are actually input to SACS. The BOIP processing in USAMSSA involves multiple BOIP files and frequently contributes to LOGSACS production problems.

The SHN are generated by DAMO-FDA and processed in a batch environment. SHN provide ODCSOPS the capability to alter or input equipment data that were incorrect or not provided by another SACS data feeder system. The SHN also are used to "fine-tune" data obtained from the BOIP.

#### 2.2.2 Developing Systems

The FSS and AS files are maintained by ODCSOPS in USAMSSA's computer environment with the TOTAL data base management system (DBMS). The FSS files are composed of one master file and five variable files. The data links between the master and variable files are the 1 position force identification code (FICOD) and 6 position unit identification code (UIC). The AS files are composed of three master files and seven variable files. The links between these files are:

<u>Master File</u>	<u>Data Link</u>	<u>Variable File(s)</u>
MACOM Index	MACOM (2 positions)	Audit File
UIC Index	UIC (4 positions)	Unit Data File
DOCNO/CCNUM Index	DOCNO (10 positions) CCNUM (4 positions)	Audit File
		Unit Data File
		Header File
		Personnel File
		Equipment File
		Remarks File
		AMSCO Strength File

There are no data links between the FSS and the AS files. Data flow between these files from AS to FSS via an AS interface module which determines which AS transactions must be input to FSS. The FSS software must



process these transactions to update FSS files by matching on UICOD, DOCNO, and CCNUM (4 positions) for the appropriate EDATE/TDATE unit subset record.

A new system currently under development at the US Army Depot Systems Command (DESCOM) is the PEM module that is integrated with TAEDP. The PEM uses the LOGSACS data along with BOIP and SHN and projected equipment asset availability data to determine when the logistics system will have equipment assets to issue to units. The PEM can produce equipment resource EDATE for the modernization program pertaining to phasing new equipment into units. These data, along with the TRADOC BOIP file, must be used in the PERSACS to provide phased personnel requirements and authorizations. It is envisioned that this file would provide UIC, SRC, LIN, QTY, equipment availability data, and other control information. This equipment phasing data matched to the BOIP and the UIC involved would be the basis for phasing personnel to coincide with equipment phasing.

### 2.3 HOW CURRENT AND DEVELOPING SYSTEMS SUPPORT THE IMPROVED/ON-LINE SACS CONCEPT

The current systems operations are not conducive to supporting an improved/on-line SACS. The developing systems<sup>1</sup> initially will not support improved data timeliness; however, some improvement in accuracy may result. The improvements in FORDIMS over the current FAS and HQDA TAADS will result from use of the TOTAL DBMS and other technical enhancements and will be essentially transparent to ODCSOPS and ODCSPER users. The implementation of FORDIMS may present some potentially new problems. These issues are discussed more fully in Report of Task C, Data Analysis of Accuracy and Timeliness, March 1979 (Report 1070-02-79-CR), of this project.

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<sup>1</sup>FORDIMS only. The VFDMIS data and processing are not firm. Hence, VFDMIS will not be available for from 2 to 5 years in the future. It is not developed sufficiently to be considered a system under development.



### 2.3.1 Timeliness

The requirements for timeliness as expressed in Appendix A, Report of Task D, Data Requirements Document (Report 1070-03-79-CR), May 1979, cannot be met by current and developing systems under present procedures. The SACS data elements are grouped in three categories. Each category has different time criteria requirements which can be satisfied through improved management of TAADS data. The MACOM input data to TAADS that impact on resource planning and distribution must be projected into the future as per Tables A.1 and A.2, Appendix A, Report of Task D. This is particularly true of the data provided in the PERSACS.

The changes to units that are input to the FSS and further implemented in AS through TAADS are not presently projected into the future to meet the aforementioned timeliness standards. Current procedures do not include rules for projecting EDATE except that the AR 310-49 series prescribes that 6 and 9 months apply when documenting CONUS and oversea units, respectively. A change in the number of management of change (MOC) windows for TAADS data flow would improve timeliness by reducing time projection requirements by 90 days, which would result in each SACS reflecting more current data.

### 2.3.2 Accuracy

Some improvement in accuracy will be realized with the implementation of FSS and AS because of the edits being incorporated in those subsystems. Many of the inaccuracies identified<sup>1</sup> will not be corrected because all data elements are not edited, no compatibility edits are made of data elements within a record, no compatibility edits are made of data elements in a unit set of records, and no compatibility edits are made between subsystems.

The overall improvement in accuracy will be the result of implementing the improved/on-line SACS concept which will require some changes

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<sup>1</sup>See F. O. Deppner, J. J. Anderson, J. I. Posner, and W. C. Scully, Report of Task C - Data Analysis of Accuracy and Timeliness, General Research Corporation, 1070-02-79-CR, March 1979.

in the FSS, AS, and TAADS. These changes are the EDATE rules, edits, audits, and an improved data management concept discussed more fully in paragraph 2.3.12.

#### 2.3.3 Dates

The EDATE currently applied in FORDIMS reflects programmed strength levels that are documented in the AS as authorized strengths. No specific rules are associated with establishing or changing EDATE. Therefore, neither the FSS nor AS subsystems presently support the EDATE concept documented on pages 4 and 5, Report of Task D.

#### 2.3.4 Documentation

The current procedures published in the AR 310-49 series of regulations do not provide for documenting geographically split units. Therefore, the AS and TAADS do not presently support the concept of maintaining separate documents for geographically dispersed MTOE and TDA units. Also, these regulations do not specify documentation rules regarding MACOM changes.

#### 2.3.5 Edits

The FORDIMS edits provided for in the FSS and AS do not cover all data elements stored in their files. The FSS edits are for the following data elements:

ARLOC	DAPPL	MACOM	SBCOM	UICOD
BRNCH	FICOD	MARCM	SRCOD	ULCCC
DAMPL	GOCOM	RCOMD	STATS	

The AS edits are for the following data elements:

AMSCO	MOSCO	LINUM
MACOM	SRCOD	UICOD

The AS edits are "soft," and although error information is provided to DAMO-FDU, the erroneous data element values are not rejected.

There are no compatibility or relationship edits performed between data elements in transactions, records, or unit record sets in each subsystem or between subsystems.

#### 2.3.6 Audits

No specific audit is designed in FORDIMS. However, the guidance tracking procedure currently being developed is a definite improvement and should help ensure that guidance is implemented in a timely manner and that all actions are proper. This procedure will not assist an improved/on-line SACS to account for all unit header records and their matching personnel and equipment detail.

#### 2.3.7 Data Flow

Data flows do not change substantially under FORDIMS. However, the guidance tracking procedure provides a tool which can provide substantial improvement and more timely implementation of PBG. Judicious use of this procedure can have a beneficial impact on timely flow of data and hence timeliness.

#### 2.3.8 Table of Organization and Equipment (TOE)

The TOE system at TRADOC produces the current TOE that is updated in USAMSSA based on information provided by ODCSOPS to produce the TOE computational file for SACS. For future SACS processing, the TRADOC TOE file must be input unaltered to SACS via disk in USAMSSA for on-line access. Ideally, the TOE file would be linked to the units file by SRC as key through use of the TOTAL DBMS.

#### 2.3.9 Basis of Issue Plan (BOIP)

The BOIP data currently used in SACS is a by-product of USAMSSA's BOIP update system. The future SACS requires that the unaltered TRADOC BOIP file be utilized in both LOGSACS and PERSACS processes. This TRADOC BOIP file must be stored on disk in USAMSSA for on-line access. The current BOIP file data must be evaluated regarding BOIP availability versus all developing weapons systems, to include availability of QQPRI data in each BOIP.

#### 2.3.10 Short Hand Notes (SHN)

The SHN file currently used in SACS is a by-product of ODCSOPS (DAMO-FDA) providing coded data to USAMSSA for automation and subsequent

application. The SHN automation processes must be upgraded to utilize on-line terminal techniques. The SHN upgrade must provide the DAMO-FDA personnel the capability to develop and update SHN data on line at any time and the flexibility of indicating period of use, one-time use, or other criteria that may be determined.

#### 2.3.11 Factoring

The guidance tracking procedure of FORDIMS should reduce the number of units which have strength differences. Therefore, after the complete implementation of FORDIMS to include this procedure, the requirement for factoring personnel will be reduced. It is envisioned, however, that some factoring will be required on a continuing basis, especially on unit strength reductions and when TOE is used as a data source in lieu of AS.

#### 2.3.12 Data Management

The guidance tracking procedure of FORDIMS should improve the management of actions pertaining to unit strengths. Data redundancy between FAS and TAADS is eliminated to the extent possible in implementing FSS and AS, the successor subsystems. Data management between DAMO-FDP and DAMO-FDF should be changed so that unit records for all years are managed by one individual or a team. Much closer monitoring of TAADS is required to ensure correct TAADS unit data are available so that they are not excluded from SACS because of incorrect or suspect data. Also, the TOE and BOIF should be monitored more closely to ensure all modernization actions are included on a timely basis. The current data management procedures do not support the improved/on-line SACS requirements for timeliness and accuracy. Data management procedures should be developed by an ARSTAF force structure System Configuration Management and Control Group (SYCMACG), which was more fully discussed in Appendix F, Report of Task C.

### 2.4 PROCESSING FOR THE IMPROVED/ON-LINE SACS CONCEPT

The improved/on-line SACS concept requires that existing SACS software be redesigned and programmed to achieve the objective of improved



data accuracy and timeliness while providing an on-line manipulation and retrieval capability.

#### 2.4.1 Files

The current files and their data elements are considered adequate to support an improved/on-line SACS. Appendix A is a matrix of all data elements identified for an improved/on-line SACS, cross-referenced to the systems or files that will provide the data. Included are three proposed data elements that are not currently resident on any file. They are specific unit POMCUS identification<sup>1</sup> (stand alone) (POMCU), POMCUS identification of each piece of equipment in each POMCUS unit (POMCL), and termination date (TDATE). The current FORDIMS data base configuration does not provide linkages between the files of each subsystem. In order to efficiently support the improved/on-line SACS concept, linkages between FSS and AS may be required to facilitate retrievals. For example, linkages between FSS and AS may be required on FICOD, UIC, SRC, and DOCNO/CCNUM to ensure data compatability on these critical data elements.

The files available and required for the improved/on-line SACS concept and relevant comments are:

- FSS. The FSS files reside in the TOTAL DBMS and consist of one single entry file containing file access data and five multiple entry files containing unit detail data. The access data elements are FICOD and UICOD. Since there is no direct DBMS linkage between the FSS and the AS files, the potential exists for records to be established in one subsystem without corresponding records in the other subsystem. SACS software must include routines to recognize and reconcile such differences.
- AS. The AS files reside in the TOTAL DBMS and consist of three single entry files containing access data and seven

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<sup>1</sup>The third position of ROBCO identifies POMCUS units. DESCOM would like separate POMCUS identification that could be reviewed easily.

multiple entry files containing unit detail data. The access data elements for the single entry files are (1) DOCNO/CCNUM, (2) UIC (4 position), and (3) MACOM. Since there is no direct link between the AS and the FSS files, the potential exists for records to be established in one subsystem without corresponding records in the other system. SACS software must include routines to recognize and reconcile such differences.

- TOE. The TOE file is developed at TRADOC and is provided to ODCSOPS semiannually for use in SACS and other processes. Monthly changes are provided for update purposes during the intervening 5 months. The improved/on-line SACS requires a complete updated TOE file on a monthly basis so that it may be used in SACS without additional processing at HQDA.
- BOIP. The BOIP file is developed at TRADOC. Currently, it is provided to ODCSOPS semiannually, with individual BOIP data provided monthly for determining impacts and basic BOIP file updating. TRADOC has agreed to provide ODCSOPS an updated file on a monthly basis. This will meet the improved/on-line SACS requirement and the HQDA BOIP update process will not be required in the future. The BOIP must be used in both LOGSACS and PERSACS.
- SHN. The SHN file is developed in ODCSOPS by DAMO-FDA. The SHN processes must be developed for use on-line and additional capabilities must be developed for categorizing SHN records as permanent, temporary, and one-time use. Also, the SHN must be used in PERSACS.

The file not available and required for the improved/on-line SACS concept and relevant comments are:

- EQPF. The EQPF<sup>1</sup> can be developed as a by-product of TAEDF and PEM processing at DESCOM. The EQPF can reflect the results

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<sup>1</sup>DAMO-FDA letter, subject: "Use of TRADOC BOIP as Sole Source for All Computation Purposes," 18 April 1979. This letter was addressed to HQ,



of phasing new equipment into units. This information along with the BOIP information can serve the following purposes:<sup>1</sup>

- Incorporate BOIP and phasing data in PERSACS.
- Incorporate phasing data in LOGSACS.
- Determine if planned personnel assets will be available to meet equipment fielding schedules.

#### 2.4.2 Phasing

The phasing of personnel and equipment authorizations based upon projected asset availability is required to provide force, personnel, logistics, and modernization planners a warning when a shortfall is anticipated in either personnel or equipment assets.<sup>2</sup> The warning lead-time must be projected at least 2, and preferably 3, years into the future so that appropriate alternative plans can be implemented. The phasing of authorizations complements the incorporation of BOIP into PERSACS, since BOIP establishes requirements only.

The phasing concept is viewed as having two parts. The equipment phasing file would serve as an input to PERSACS, and also input to LOGSACS, if desired. Part one would be to establish a tentative schedule for phasing personnel requirements into a unit to coincide with the phasing of equipment. Part two would be a comparison of personnel assets to phased personnel authorizations for review with respect to personnel asset impacts. If projected personnel assets were adequate to accommodate the phased authorizations, the tentative schedule would be confirmed as the approved schedule. However, if projected assets were inadequate to accommodate the phased authorizations, the ODCSOPS force managers and ODCSPER command managers would be consulted to determine an acceptable alternative course

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TRADOC, and indicated that DARCOM will merge BOIP data and manufacturing schedules to develop asset-phased requirements for the POM years by December 1979.

<sup>1</sup>The equipment and personnel phasing data could be established as a permanent SACS file, updated monthly or quarterly by DESCOM, available for retrieval purposes, and output quarterly within the PERSACS and LOGSACS.

<sup>2</sup>DAMO-FDA memorandum, subject: "Material Modernization Data in PERSACS (Conceptual)," 16 August 1978.

of both equipment and personnel phasing acceptable to personnel managers and logisticians.<sup>1</sup>

#### 2.4.3 Processing

The improved/on-line SACS concept requires that current SACS software be redesigned so that control rests with the functional user, that interactive manipulative processes are available for terminal operator use, and that all required files are available on line. The improved/on-line SACS concept encompasses the processes currently performed by SIGMA, BASIC SACS, LOGSACS, and PERSACS software. Further, it encompasses the use of BOIP and SHN in both LOGSACS and PERSACS. In addition to developing the improved/on-line SACS software, an audit module is essential for record control purposes. The audit module should be developed to account for all units, unit header records, and detail records for both personnel and equipment.

The present SACS software will not accommodate the improved/on-line SACS concept. The present SACS software, except SIGMA, is completely batch-process oriented. This applies also to BOIP update and use, SHN development and use, and TOE update and use. The EQPF is not presently in existence. It will be used in the improved/on-line SACS to coordinate the equipment and personnel requirements involved in the modernization program and other purposes as required.

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<sup>1</sup>This would comply with the intent of DAMO-FDA memorandum cited in fn. 2, p. 12.

SECTION 3  
CONCLUSIONS AND RECOMMENDATIONS

The determination of the extent to which current and developing systems do or do not support the requirements of an improved/on-line SACS resulted in the following conclusions and recommendations.

3.1 REQUIREMENTS WHICH ARE SUPPORTED

Current and developing systems do support the following requirements:

- With the exception of the addition of three data elements not currently available to SACS, the standardization of data elements among feeder systems is generally supported. The data elements of POMCL, POMCU, and TDATE need to be added.
- The requirement for improvement in data flow will be partially satisfied by the Guidance Tracking Procedures, if the procedures are instituted under strong management control.

3.2 REQUIREMENTS WHICH ARE NOT SUPPORTED

Current and developing systems do not support the following requirements:

- The use of unaltered files provided by TRADOC, DESCOM, and HQDA is not supported by the current and developing systems. The TOE file must be stored on disk for on-line access. The BOIP file must be sufficiently complete, accurate, and current to eliminate updating by HQDA and must be stored on disk for on-line access. The SHN automated process must be upgraded to incorporate the personnel notes and to utilize on line terminal techniques.
- The requirement for BOIP and modernization phasing must be incorporated in both LOGSACS and PERSACS and is not now supported. Data from the PEM module and data from the

improved BOIP must be incorporated into LOGSACS and PERSACS to assure a coordinated phasing of new equipment with the associated personnel into the force. An EQPF must be developed and included in the improved/on-line SACS.

- The requirement for effective data flow to provide timely and accurate data is not supported by current systems and only partially by developing systems (see paragraph 3.1). Data flow, and the resulting timeliness and accuracy, can be partially satisfied by incorporating a four MOC concept in TAADS, establishing an ARSTAF force structure SYCMACG, and requiring that input change data be projected into the future.
- The requirement for EDATE rules, to minimize turbulence and reduce the high volume of changes, is not supported by current or developing systems. EDATE rules must be incorporated into the improved/on-line SACS.
- The management and configuration control requirement for the improved/on-line SACS is not supported. The incorporation of the SYCMACG into the overall force structure and manpower management process within the Army will satisfy the requirement for professional management of a complex management information system.
- The requirement for interactive software for the development, processing, and retrieval of SACS data is not supported by current and developing systems. Existing and additional SACS software must be redesigned and programmed to achieve improved accuracy and timeliness and to provide an on-line manipulation and retrieval capability. Included in this redesign are edit, audit, and documentation rules and file linkages.
- Systems, users', and training documentation requirements are not supported by current and developing systems. The following documentation, as a minimum, is required for the effective management and operation of SACS: Data Management Plan, Data Element Directory, Systems Procedures Manual, and a Functional User's Guide.



APPENDIX A

IMPROVED/ON-LINE SACS DATA REQUIREMENTS VERSUS  
FEEDER SUBSYSTEMS/DATA TO SATISFY THAT REQUIREMENT

Improved/On-Line SACS Data Requirements versus Feeder Subsystems/Data to Satisfy That Requirement

Mnemonic	Description	SACS	FSS	AS	TOE	BOIP	SHN	Remarks
ACTCO	Action Code	1A	1A					
ADCON	Army Deployment Control Code	6A/N	6A/N					
AMSCO	Army Management Structure Code	11A/N	11A/N	11A/N				
ARLOC	Army Location Code	5A/N	5A/N					
ASICO	Additional Skill Indicators	2A/N		2A/N	(AS1) 2A/N (AS1) 2A/N			
AUBFA	Authorized before Factoring	2N						
AUSTR	Authorized Strength	4N		4N			(AUTH STR) 5N	
AUTHR	Authority	15A/N	15A/N					
AUTREQ	Authorized Equipment	4N		4N		(QUANTITY) 4N	(AUTH QTY) 5N	
BASIS	Basin Code	1A	1A					Data values in this element will be reflected in the PHASE field in the SACS file.
BPTRI	BOIP Personnel Tradeoff Requirement Indicator	1N						
BRICH	Branch of Service Code, Unit	2A	2A	2A				
BRNCP	Branch of Service Code, Personnel	2A		2A	(BR) 2A (BR) 2A			
CARSS	Combat Arms Regimental System	2N	2N					
CATCO	Category Code	1N	1N	1N				
CCNUM	Command Control Number	6A/N	4N	4N				
CHCNR	SRC Change Number	2N	2N	2N				
CMPO	Component Code	1A/N	1A/N				1A/N	
DAMP	Department of Army Master Priority List	5A/N	5A/N					
DAPPL	Department of Army Programming Priority List	5A/N	5A/N					
DOCNO	Document Number	10A/N	10A/N	10A/N				
DPHRT	Deployment Area and Month	4A/N	4A/N					
DISCMP	Display/Compute Indicator	2A	2A					
EDATE	Effective Date	6N	6N	6N			6N	
ELSEQ	Element Sequence Number	2N	2N					
ERCOO	Equipment Readiness Code	1A		1A				
FICOD	Force Identification Code	1A/N	1A/N					
FRCAT	Functional Category Code	1A/N	1A/N					
FORCO	Force Code	1A/N	1A/N					
GRADE	Grade or Position	2A/N		2A/N	2A/N	2A/N	2A/N	
IDFHT	Identify Code	1A		1A			1A	
JCSTY	JCS Unit Type Code	5A/N	5A/N					
LAOTH	Logistics Authorized, Other	2N		4N				
LAUBO	Logistics Authorized from BOIP	2N				6N		



Mnemonic	Description	SAC'S	FSS	AS	TOE	BOIP	SHN	Remarks
LAUSH	Logistics Authorized from Shorthand Notes	2N					4N	
LAUTA	Logistics Authorized TAADS Quantity	2N		4N				
LAUTO	Logistics Authorized TOE Quantity	2N			4N			
LIICO	Language Identification Code	2A/N		2A/N				
LINUM	Line Item Number	6A/N		6A/N	(LIN) 6A/N (LIN) 6A/N			
LOCCO	Location Code	3A/N	3A/N				3A/N	
LRBOI	Logistics Requirement from BOIP	2N				5N		
LROTH	Logistics Required, Other	2N						
LRSHN	Logistics Required from Shorthand Notes	2N					5N	
LRTAD	Logistics Required TAADS Quantity	2N		4N				
LRTOE	Logistics Required TOE Quantity	2N			4N			
MACOM	Major Command	2A/N	2A/N	2A/N			(ASGMT) 2A/N	
MBCHD	Mobilization Command Assignment	2A/N	2A/N					
MBLOC	Mobilization Location Code	3A/N	3A/N					
MBPRD	Mobilization Period	3A/N	3A/N					
MBSTA	Mobilization Station	9A/N	9A/N					
MOECO	Personnel Occupational Specialty Code	5A/N		5A/N	5A/N (MOS) 5A/N (MOS) 5A/N			1 pos SQUAD of AS must be used to complete 5 pos.
NTREF	Note Reference Number	2N						
OPAGY	Operating Agency	2N	2N					
OPDAT	Operational Data	1A/N	1A/N					
PACIV	Unit Authorized Civilian Aggregate Strength	5N	4N	(AUCIV) 5N				
PAENL	Unit Authorized Enlisted Strength	5N	5N	(AUENL) 5N				
PAMIL	Unit Authorized Military Aggregate Strength	5N	5N	(AUMIL) 5N				
PAOFF	Unit Authorized Officer Strength	5N	4N	(AUOFF) 5N				
PAUBO	Personnel Authorized from BOIP	2N				2N		
PAUSH	Personnel Authorized from Shorthand Notes	2N					2N	
PAUTA	Personnel Authorized TAADS Strength	2N		2N				
PAUTO	Personnel Authorized TOE Strength	2N			2N			
PAMOF	Unit Authorized Warrant Officer Strength	5N	4N	(AUMOF) 5N				
PECOD	Program Element Code	6A/N	6A/N					
PHASE	Phase Code	1A		1A/N				Previously Identified as required, no longer a requirement. Data values in this field on SACS file are contained in BASIS.

Mnemonic	Description	SACS	FSS	AS	TOE	BOIP	SNH	Remarks
PRMCL	PRMCLUS ID for LIN							Proposed new data element.
PRMUU	PRMUU ID for Unit							Proposed new data element.
PRBU1	Personnel Requirement from BOIP	2N						
PRCIV	Required Civilian Aggregate Strength	5N	5N	(R/CIV) 5N				
PRENL	Required Enlisted Strength	4N	4N	(R/ENL) 5N				TOE ENL Aggregate must be computed.
PRMIL	Required Military Aggregate Strength	5N	5N	(R/MIL) 5N				TOE MIL Aggregate must be computed.
PRM11	Personnel Remarks 1	2A/N		2A/N				
PRM12	Personnel Remarks 2	2A/N		2A/N				
PROFF	Required Officer Strength	4N	4N	(R/OFF) 5N				TOE OFF Aggregate must be computed.
PRP/N	Personnel Required Shorthand Notes	2N					2N	
PRSTA	Personnel Required TADUS Strength	2N		2N				
PRTOE	Personnel Required TOE Strength	2N			2N			
PRWOF	Required Warrant Officer Strength	4N	4N	(R/WOF) 5N				TOE WO Aggregate must be computed.
RCNUM	Record Control Number	1N		1N	(RCN) 1N	1N		
RCPD	Report Code	1A	1A					
R/EQ	Required Equipment Quantity	4N		4N		(B/L LIN (R/E/ITT) (R/ASTITT) 5N		
R/OBJ	Readiness Objective Code	4A/N					(R/OJTE) 5N	
R/STR	Required Strength Personnel	5N		5N				
SOURCE	Source of Detail Data	2N	1A	1A				
SPLIT	Split Unit Indicator	1A	1A					
SRCTO	Standard Requirements Code	13A/N	13A/N	(SRCTO) 5A/N	9A/N	(SRCT) 13A/N (SRCT) 13A/N		The SRCTO will require manipulation in SACS. SRCT pos 10 to 14 differ between files.
STAFF	Staff Analyst	3A/N						
STATS	Unit Status Code	2A/N	2A/N					
STNUM	Station Name	9A/N	9A/N				6N	Proposed new data element
TERM	Termination Date	5N					5A/N	
TPNMA	Troop Program Sequence Number	5A/N	5A/N					
TRPCD	Type Code	1N	1N					
UICOD	Unit Identification Code	6A/N	6A/N	6A/N		(UIC) 6A/N (UIC) 6A/N		BOIP and SIN have SAC and UIC in a common field dependent on need.
UNCLC	Unit Classification Code	5A/N	5A/N					
UNMEX	Unit Number	4A/N	4A/N					
UNPID	Unit Package Identification Designator	2A/N	2A/N					
UNITG	Unit Description	21A/N	21A/N	50A/N	27A/N			The ASN TOE data will be used.